

DEPARTMENT OF TRANSPORTATION
ENGINEERING SERVICE CENTER
Transportation Laboratory
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METHOD OF TEST FOR ENVIRONMENTAL OPERATION OF TRAFFIC SIGNAL SYSTEMS

CAUTION: Prior to handling test materials, performing equipment setups, and/or conducting this method, testers are required to read **"SAFETY AND HEALTH"** in Section E of this method. It is the responsibility of the user of this method to consult and use departmental safety and health practices and determine the applicability of regulatory limitations before any testing is performed.

A. SCOPE

This method describes the general procedure and equipment which should be used in the evaluation of Traffic Signal Systems under extremes of ambient temperature.

B. APPARATUS

1. The temperature-controlled enclosure device shall be capable of simulating an ambient temperature of $71 \pm 3^{\circ}\text{C}$.
2. The temperature-controlled enclosure device shall be capable of simulating an ambient temperature of $-17 \pm 3^{\circ}\text{C}$.

C. TEST PROCEDURE

1. The test procedure shall consist of the items described in California Test 658 "Method of Test for Function and Pre-Installation Inspection of Traffic Signal Systems." The performance of this test shall consist of the application of California Test 658 at $-17 \pm 3^{\circ}\text{C}$ and $71 \pm 3^{\circ}\text{C}$.
2. Extended Function and Operation:

Conformance with specifications include all sequences, durations, and functions of the operation. The complete system shall operate, under testing, for a maximum period of 14 days at either or both

ambient temperature extremes stated in Section C-1, during which the device shall operate in accordance with Section 86 of Caltrans Standard Specifications and the applicable Special Provisions.

3. Mechanical-Visual inspection:

A mechanical-visual inspection shall be performed to determine if any adverse effects occur due to operating the device at extreme temperatures.

D. REPORTING OF RESULTS

Report results of functional and physical characteristics and of departures of operations on Form TL-0610.

E. SAFETY AND HEALTH

Prior to handling, testing or disposing of any waste materials, testers are required to read: Part A (Section 5.0), Part B (Sections 5.0, 6.0 and 10.0) and Part C (Section 1.0) of Caltrans Laboratory Safety Manual. Users of this method do so at their own risk.

REFERENCE: California Test 658

End of Test (California Test 659 contains 1 page)